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Potential Market Income and Poverty in Canada, 1986-1996

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by
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Abstract

In this study we seek to trace an image of poverty in terms of the capability or potential of non-aged families to earn a market income in Canada between the years 1986 and 1996. To achieve this we have taken as our starting point a measure of poverty first developed and applied by Robert Haveman and Irwin Garfinkel in the American context. More specifically, we estimate poverty rates for Canadian families by using a measure of their potential annual income calculated on the assumption that all the non-aged adults in a given family are working full time, full year at a wage appropriate to their accumulated human capital. By using a measure that reflects, better than current market income, the more permanent characteristics of families and in particular their human capital, this analysis contributes to the study of poverty in Canada by identifying the most disadvantaged families, that is, those who are poor in terms of the attributes that affect their ability to generate an income sufficient to provide for their essential needs.

One of the conclusions reached is that, generally speaking, for non-aged families of two or more persons, the problem of poverty, all other things being equal, appears to have been particularly linked to the problem of inadequate access to the labour market. This conclusion varies, however, according to the type of families considered and the characteristics of the head of the family. Results for couples, older families and for families with more schooling appear to confirm this conclusion. However, for young families, those headed by someone with little schooling, as well as for single-parent families, their capability poverty rates, which continue to be very high with our measure, seem to indicate that the problem may be more linked to a lack of human capital or at least to a poorer return for it on the labour market.

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Résumé

Dans la présente étude, nous cherchons à dresser une image de la pauvreté des capacités ou du potentiel des familles non âgées à gagner un revenu de marché au Canada entre les années 1986 and 1996. À cette fin, nous nous inspirons d'une mesure de la pauvreté développée and appliquée pour la première fois par Robert Haveman and Irwin Garfinkel dans le contexte américain. Plus particulièrement, nous estimons des taux de pauvreté pour les familles canadiennes en nous fondant sur une mesure de leur revenu annuel potentiel calculé en faisant l'hypothèse que tous les adultes non âgés au sein d'une famille donnée travaillent à temps plein toute l'année à un salaire qui correspond à leur capital humain accumulé. En utilisant une mesure qui reflète, plus que ne le fait le revenu de marché courant, les caractéristiques plus permanentes des familles et, en particulier leur capital humain, cette analyse contribue à l'étude de la pauvreté au Canada en identifiant les familles les plus démunies, c'est à dire celles qui sont pauvres en fonction de leurs attributs qui affectent leur capacité à générer un revenu suffisant pour subvenir à leurs besoins essentiels.

L'étude conclut notamment que pour l'ensemble des familles non âgées de deux personnes and plus, le problème de la pauvreté semble, toutes choses égales par ailleurs, avoir été particulièrement lié à celui d'un accès inadéquat au marché du travail. Cette conclusion varie cependant selon le type de familles considéré and les caractéristiques de leur chef. Les résultats relatifs aux couples, aux familles plus âgées ainsi qu'aux familles plus scolarisées semblent aller dans le sens de cette conclusion. En revanche, pour les jeunes familles, celles dont le chef était peu scolarisé ainsi que pour les familles monoparentales, leur taux de pauvreté des capacités qui reste encore très élevé avec notre mesure semble indiquer que le problème serait davantage lié à un manque de capital humain ou à tout le moins à un rendement peu intéressant de celui-ci sur le marché du travail.

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1. Introduction

Since the late 1980s, the idea that individuals and their families, not governments, should be primarily responsible for their economic security has become increasingly widespread in Canada and elsewhere.

This emphasis on individual responsibilities and on the need to reduce the economic and social roles of government raises a number of questions. One such question, among others, is whether families have the capability to ensure adequate access to the labour market, and another is what return can these family expect from that market based on the characteristics of their human capital.

This paper looks at the second of these questions. To this end, we have used a measure of poverty first developed and applied by Robert Haveman and Irwin Garfinkel,[1] which measures the capability of non-aged families[2] to generate sufficient annual income to provide for their needs if they used their full potential on the market.

More specifically, we sought to estimate the capability poverty rates of Canadian families by using a measure of their potential annual income calculated on the assumption that all non-aged adults in a given family are working full time, full year at a wage rate that corresponds to their accumulated human capital.

By using a measure that reflects, better than current market income, the more permanent characteristics of families and, in particular, their human capital, this analysis contributes to the study of poverty in Canada by identifying the most disadvantaged families, namely, those that are poor because of their attributes, which affect their capability to generate an income sufficient to provide for their basic needs.

The next section provides a brief overview of some of key results of a few studies that analyse the capability or potential of individuals or families to generate market income. The third section describes the method used to calculate the predicted poverty rates and other statistics discussed in this analysis. Section 4 contains the results and Section 5, our conclusions.

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[1] Garfinkel, I. and R. Haveman; *Earnings Capacity, Poverty and Inequality*; Academic Press, New York, 1977.

[2] Non-aged families are those in which the head is less than 65 years old.

2. Literature review

The idea of explicitly linking a measure of earning potential to the analysis of poverty appears to have been applied first by Garfinkel and Haveman (1977) in the United States. This concept was then applied several times in an American context by Haveman and Buron (1991, 1992a, 1992b) and then more recently by Haveman and Bershadker (1998). Other American authors, including Brady and Wiseman (1997) and Burtless (1998) have also used a concept of potential income in analysing poverty for certain disadvantaged groups.

The Haveman and Bershadker study that we used as the foundation for this analysis, relies on a measure of the capability of families to generate market income assuming that all adults under the age of 65 in these families are working to their full potential, that is, full-time, full-year. A family is then considered to be capability-poor if its potential full-time income remains below its poverty cut-off (the official American poverty cut-offs are used).

There were three key findings from their analysis. First, the groups generally considered at high risk of poverty, such as Afro-Americans, individuals living in lone-parent families with children under the age of 18, and those in which the head has little schooling, had, as could be expected, the highest capability poverty rates over the period of the study (1975-1995). Further, the analysis of the composition of poor populations based on the official poverty measure and that constructed by the two authors shows that these groups also appear to have been more strongly represented in the capability-poor population than they were in the "officially-poor" population.

A second important finding, based on the comparison of trends in the capability poverty rate and the official poverty rate for the population in general between 18 and 64, reveals that the first increased more sharply than the second did. While the capability poverty rate experienced an average annual growth rate of 3.4 percent over the entire period, the official poverty rate increased only an average of 1.7 percent annually. Among the possible explanations for this difference in the two measurements, the authors suggest that the sharp increase in the inequality of wages within age groups, ethnic groups and educational groups over the period could be a key factor. This deepening wage inequality, which exerts upward pressure on both the capability poverty rate and the official poverty rate, would have a stronger impact on the former rate because the relative deterioration in wages at the bottom of the scale impacts *all of the potential*

hours of work, while only the *hours actually worked* are affected in the estimation of the official poverty rate (Haveman and Bershadker, 1998, p.26)

Lastly, comparing the trends in the capability poverty rates between the various socio-demographic groups shows that those generally considered at higher risk of poverty (based on the official measure) actually experienced smaller increases in their capability poverty rates than the average population. The reverse occurred for the groups considered relatively sheltered from poverty, such as married couples and those with higher education levels, the latter having experienced the greatest increases over the period.

The policy implications of these findings are clear. The authors point out in their conclusion that, to the extent that income support measures are excluded (measures often criticized for their disincentive effects), essentially two broad strategies are available. The first involves raising education and vocational training levels and improving the skills and other human capital characteristics of individuals at the bottom of the capability ladder. The second, more controversial approach would be, for example, to increase the return that the least able members of society receive for using their human capital in the labour market by raising the minimum wage.

The Brady and Wiseman study used a methodology similar to that used by Haveman and Bershadker. These two authors build a measure of full-time potential income for men and women in California between 1972 and 1994, and compared these trends with those in social assistance benefits (AFDC,[3] food stamp benefits) received in that state.

The results of that analysis reveal that while the real amount of social assistance benefits fell in California over the period studied, the capability of generating full-time annual earnings of those individuals whose characteristics placed them more at risk of needing social assistance fell more quickly, especially during the 1990s. One interesting fact is that this decline in full-time potential earnings was greater for men than for women.

However, Brady and Wiseman focused their analysis more on women and showed that, for those most at risk of depending on welfare (the representative individual was 25 with two children, had

[3] Aid for Families with Dependant Children.

never been married and had little schooling), real benefits fell by 11.6 percent between 1975 and 1993, while their median capability to generate full-time annual earnings fell by 10.5 percent. However, if we look at the most recent period, we find that the real benefits of these women fell 10 percent between 1987-1989 and 1992-1993, while their estimated median capability to generate full-time earnings fell 19 percent.

These authors conclude that estimated trends in the potential earnings of individuals are problematic, especially in a context of social reform where the objective was to apply the "Californian principle of equity," which maintains that a person should be able to earn more through work than through social assistance. However, a number of reforms introduced recently in California, which make it easier to combine work and social assistance benefits, are considered timely given these trends. On the other hand, these authors point out that the new principle in the United States of transitional social assistance and the principle of equity as espoused in California are difficult to reconcile with these same trends.

The Burtless research (1998), which also focused on single mothers receiving AFDC, includes an analysis of the potential income of these women if they were able to work full-time year round (2,000 hours annually). The potential income used by this author was estimated by assigning to women 18 years old in 1979 and who had received social assistance at least once between 1979 and 1981, the hourly wage (multiplied by 2,000) of those women for whom a wage was also observed between 1979 and 1990.

In the context of welfare reform in the United States, the author's findings offer two important lessons. The first is that single mothers could substantially increase their capability to provide for their needs themselves by working full-time, full-year. Thus, if all of the women who received social assistance between 1979 and 1981 had worked 2,000 hours in 1990, their average income would have been around double their actual or observed earnings. The second lesson is less reassuring however. Even if all of these women had worked full-time year round at the predicted annual wage, the author estimates that about half of them would have earned less than 90 percent of the income corresponding to the poverty cut-off for a family composed of one adult and three children.

These results, which demonstrate the degree to which single mothers would continue to be disadvantaged, are even more dramatic given that the predicted income of these women is

definitely an overestimation of the income they could expect to earn in the labour market. There are at least three reasons noted by the author for this situation. First, the average wage for women for whom such a wage was observed overestimates the wage that women who are not working (especially those who rely on welfare for long periods of time and who are probably less qualified than those who work) could expect to earn. Second, the massive influx of these women into the labour force would inevitably lower wages (an effect that is not taken into consideration in the predictions of potential full-time earnings).[4] Last, it is unlikely that all single mothers with young children will be able to work full-time, full-year. Some will undoubtedly prefer part-time work in order to care for their children, while others will face periods of involuntary unemployment, illness or will have time management problems because of inadequate childcare services.

In light of the precariousness of the economic position of single mothers, the author, in his conclusion, also raises the question of whether a strategy based on employment, occupational training and education might help reduce the number of poor families that depend on welfare. The conclusion is not particularly encouraging in this regard either. In effect, a review of the various programs available in the United States shows that, while such a strategy enables some of these women to hope for higher wages, in many instances those wages are still too low to significantly raise their economic status. Thus, without some other form of public assistance, such a strategy will not go far to reducing poverty among American single mothers in the short or medium term.

To our knowledge, there are no Canadian studies that have tried to identify and measure the size of the population most vulnerable to the market economy by measuring their potential to earn employment income. Research that does focus on this population relies rather on a measure of the "observed" income of families before transfers when examining poverty rates and other relevant statistics based on this income concept.

Just such an approach was used recently in a study by the Canadian Council on Social Development (CCSD). In that study, which covers the period from 1984 to 1994, Schellenberg and Ross (1997) sought to evaluate the extent to which the labour market might enable Canadian families to earn sufficient income to rise above the poverty line. To this end, they compared the

[4] None of the studies discussed in this paper take this effect into consideration.

annual income before transfers (or market income) to the before-tax low-income cut-offs of Statistics Canada.[5]

Their findings, based on an analysis of market poverty rates, average poverty gaps and an index that combines these two elements, indicate that the degree of vulnerability to market poverty varies considerably from family to family. For example, in 1994, lone-parent families were about three times more vulnerable than the average of families.[6] The same holds true for the youngest families in general and, in particular, for those in which the head has less than 11 years of schooling, the former being 2.4 times more vulnerable and the latter 4.4 times more vulnerable than all families in 1994. At the other extreme, these authors show that higher education (between 0.37 times and 0.53 times for a university education, depending on the age of the head of the family) and more extensive experience, as defined by the age of the head of the family (0.51 times for families in which the head was between 45 and 54), tend, as could be expected, to reduce significantly the degree of vulnerability to market poverty.

Schellenberg and Ross also include in their analysis an examination of the main causes of market poverty. They then examine three of these causes more closely, namely, low wages, periods of unemployment, and periods of time spent outside the labour force.

Using descriptive statistics on the status with respect to the labour market of adults living in poor families based on their market income, they evaluated the relative importance of each of these factors. Their results show that for the heads of two-parent families poor on the basis of their market income in 1994, the main factor in 35 percent of the cases was one or more periods of unemployment (lasting for more than 10 weeks in total in 96 percent of cases), while low wages appears to have been the main contributor in 30 percent of cases (30 percent of the heads of these families worked the full year, mostly full-time). In the remaining 35 percent of cases, being outside the labour force for part or all of the year seems to have been the main reason for market poverty.[7]

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[5] Investment income is excluded from their market income measure.

[6] These results are based on their poverty index (incidence*average depth). See in particular pages 33 and 34 of the CCSD paper listed in the bibliography.

[7] The main reasons for exclusion from the labour force for men were retirement, voluntary or forced, and inability to work due to a disability or illness.

For the wives in these families, the main factor in almost 60 percent of cases was being out of the labour market, mainly because of family obligations like childcare. Low wages seem to have been the fundamental cause in about 20 percent of cases, while in the remaining 20 percent, one or more periods of unemployment during the year (lasting in 94 percent of cases for more than 10 weeks in total) appear to have been the main factor. For lone-parent families, the relative importance of the various factors was similar to that observed for wives of two-parent families.

3. Data and methodology

3.1 Survey of Consumer Finances

Empirical modelling, as well as the descriptive analysis of observed and predicted poverty rates, relies on the use of the public use microdata files of the Survey of Consumer Finances (SCF) between 1986 and 1996.[8] Files on persons aged 15 years and older were used to estimate the capability of individuals to generate annual earnings, while the files on economic families were used to evaluate this potential at the family level, as well as to calculate poverty rates and other relevant statistics.

The SCF provides access to a large amount of information on incomes and socio-economic characteristics of a very large sample of individuals aged 15 and older and on economic families representative of the Canadian population (after the application of universal weighting).[9] In this way, it is possible to distinguish several types of income, such as disposable income, employment income, income from government transfers, as well as several other income sources. Information is also available on the age and gender of individuals, their marital status, their geographic location, their status on the labour market, their education level, the age and number of children in the family, and so forth.

3.2 Empirical procedure

In this section we describe the empirical procedure used to estimate the measure of potential full-time income of families and the predicted poverty rates resulting from that measure. Although there are a few differences, this procedure is based directly on the procedure developed and applied by Robert Haveman and Andrew Bershadker (1998).

In order to obtain the desired measure of the capability of families to escape poverty, we began by estimating the potential earnings that adults in a given family might be able to generate annually if each of them worked to their full capability, that, is full-time, full-year (49 weeks or

[8] The scope of the period studied, which we wanted to be as large as possible, was determined by the availability of data. The 1996 income year was the most recent one for which data was available at the time we started this project. The choice of 1986 as the start date of this research was dictated by the fact that the key files, needed to link the files of individuals and economic families, were not available to the public prior to that year.

[9] The survey excludes Aboriginals living on reserves and persons living in institutions.

more and at least 30 hours per week), and at a wage corresponding to their accumulated human capital.

These predictions of potential annual earnings are based on the estimation of a Heckman-type two-equation model that makes it possible to correct for selection bias.[10] Separate calculations were done for non-student and non-self-employed men and women between 15 and 64.[11]

The first equation is a probit on the decision to participate full-time, full-year (FTFY) in the labour force. The chosen explanatory variables make it possible to take into consideration the factors that affect expected market wage (age, age squared, education), the incentive to work (number of children under 18, presence of preschool-aged children, marital status) and the general conditions of the local labour market (province of residence and size of the region of residence).[12]

Using this equation, we built a selectivity correction term (called the inverse of the Mills ratio, λ) for each individual:

(1) $$\lambda_i = \frac{\phi(\gamma' w_i)}{\Phi(\gamma' w_i)}$$

where ϕ and Φ represent respectively the density function and the cumulative function of a standard normal variable, w_i is a vector of explanatory variables and γ is a vector of the estimated coefficients.

This term was then included as an additional regressor in the second equation of the model. In this equation, annual earnings are estimated by ordinary least squares (OLS) on a sample of FTFY workers only. It is of the form:

(2) $$Y_i = X_i\beta + c\lambda_i + \varepsilon_i$$

[10] See Heckman (1979).

[11] The exclusion of self-employed workers is normal in this type of model since their observed earnings usually represent a return on both human and physical capital.

[12] The list and description of the variables used in the estimation of the model are given in Table A1.

where Y_i represents the natural log of observed full-time, full-year earnings,[13] X_i is a vector of explanatory variables, λ_i is the correction term derived from the first term and ε_i is an unobserved residual term, which is assumed to be randomly generated and normally distributed $(0,\sigma^2)$. The explanatory variables included in X_i are the same as those in the equation of full-time, full-year labour market participation, except for the "number of children under 18" and "presence of at least one preschool-aged child," which serve to identify the model.[14]

Using the estimated coefficients[15] from each of the annual earnings equations and the characteristics of all individuals in our sample (now also including self-employed workers and students), we predicted the natural log of potential annual earnings of adult men and women (GP_i) for each year of the analysis.[16]

In their article, Haveman and Bershadker point out that because this procedure neglects the role of unobserved human capital, labour demand characteristics and luck in the annual earnings determination process, the distribution of predicted annual earnings is artificially compressed. In order to include these characteristics we, like these two authors, applied a random shock to each of the individual predictions. Specifically, we added to each of the predictions a term obtained by multiplying the standard deviation of each of the annual earnings equations for men and women by a randomly generated and normally distributed variable (0,1).[17]

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[13] Annual earnings include salaries and wages received over the year. Although self-employed workers are excluded from the sample, there are still some salaried individuals who declare also receiving income from self-employed work. Such income is included in Y_i.

[14] Identification of the Heckman term (λ_i) in the annual earnings equations depends on the restrictions imposed on this second equation. However, it is difficult to select the variables to identify this term. First, few variables affect the decision to participate in the labour market but not annual earnings. Second, the choice of possible variables in a data bank like the SCF is limited. We therefore opted for the variables relating to children for the most part because it is a standard practice in the literature. We did, however, test various specifications (with slightly different exclusion conditions) but with little difference in the final results.

[15] The results of the model's estimations for all years between 1986 and 1996 are presented in Tables A2 to A5.

[16] These predictions are not conditional on self-selection into the sample of FTFY workers. To do this, within the prediction, we equalize the correction term for each individual to the average of the correction terms for FTFY workers. We then multiply this term by the estimated coefficient linked to the inverse of the Mills ratio and add this constant to each of the predictions. The same capacity to generate annual earnings is then assigned to individuals with identical characteristics, regardless of their selection into the group of full-time, full-year workers or not (see Haveman and Bershadker (1998)).

[17] The assumption underlying this procedure is explained in Haveman and Bershadker (1998). Interested readers can refer to this work and, in particular, to footnote 13 at page 10.

Because some individuals are unable to work full-time, full-year due to the fact that they are students or suffer from illness or a disability or other factors related to labour demand, we adjusted the individual predictions to take some of these constraints into consideration. To this end, we used the information available on the reasons why an individual was not working to calculate an adjustment term for students and persons with a disability.[18] This term, Γ, is equal to (49-WNW)/49, where 49 is the cut-off beyond which an individual is considered to be working the entire year and WNW is the number of weeks not worked because of a disability or being a student.

Therefore, for each adult-aged individual, the adjusted prediction of annual earnings is described by the equation:

$$GP_i = \exp(X_i\beta + \sigma * VA_i) * \Gamma_i \quad (3)$$

where X_i includes the same explanatory variables as in the equations of the natural log of annual earnings for men and women, β represents the estimated coefficients, σ is the corrected standard deviation of each of the regressions, VA_i is the randomly generated and normally distributed variable (0,1) and Γ_i is the adjustment term we just discussed.

Once the adjusted predictions for full-time, full-year potential earnings were calculated for each adult, the second stage was to calculate these predictions for each family. We began by rebuilding the families, and then simply added each of the individual adjusted predictions in each one. The next step was to add the investment and other non-government monetary income of each family.[19] Our measure of the potential full-time income of a family is therefore given by the equation:

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[18] Among the reasons given are "permanent inability to work" and "going to school." Another possible reason is "family responsibilities," often cited by women who must care for their children. At this point in the research, we have not tried to adjust the predictions to reflect either the latter reason or reasons related to labour demand. Further, it is possible that some of these contraints affect the number of hours worked in the week without affecting the number of weeks worked. The lack of information for all years in the SCF regarding the reasons for which an individual worked less than 30 hours per week prevents us from adjusting the individual predictions at this level.

[19] We added these sources of income because we assume, like Haveman and Bershadker, that each family makes full use of the resources available to it, not just those that it can earn on the labour market. Other monetary income does not include money received for child care, foreign income, alimony and copyright income, because these sources of income are unfortunately combined in a single SCF variable that also includes income from severance payments and from salary insurance plans. However, since a majority of families would not have received income from these latter sources based on our assumption of full-time, full-year work, we have opted not to take this SCF variable into consideration in our meausre of potential family income.

(4) $$GP_f = \left(\sum_i GP_i \right) + \Omega_f$$

where Ω_f is the investment and other monetary income of the family.

Lastly, to identify capability-poor families, we compared the predicted full-time income of each family to the corresponding low-income cut-off. Statistics Canada's 1992 before-tax cut-offs were used.

4. Presentation of findings

This section describes the inability or lack of potential of Canadian families to be self-reliant, using the methodology described in the previous section.[20] The situation of families based on their observed market income (i.e. actually received) is also presented to serve as a basis for comparison with the measure used.[21]

The analysis is essentially divided into two parts. In the first, we examine the incidence of poverty that indicates the proportion of families living below their poverty cut-off in a given year. The evolution of this incidence is also examined. In the second part, we concentrate on the characteristics of the population of capability-poor families and on how these characteristics have changed over time.

4.1 Level and trends in capability poverty rates

In Table 1 we summarize the main findings of our estimations of capability poverty in Canada for the years 1986 and 1996. Poverty rates are examined for different family types and by age and education of the head of the family. The results obtained from a measure of observed market income of families is also presented. Columns 2 and 3 present the predicted rates of capability poverty in 1986 and in 1996, while Column 6 indicates the change, in percentage points, of the predicted rate between these two years. Columns 4 and 5, and Column 7 give the same information but based on observed market income. To provide a clearer picture of the annual trends in predicted and observed poverty rates over the period of the study, we also provide these rates for all years in Graphs 1-1 to 3-5.[22]

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[20] The results presented here refer to economic families composed of two or more persons. We chose not to include single men and women, which require a separate analysis. Nevertheless, predicted and market poverty rates for these persons were estimated. The results are available on request.

[21] In the Survey of Consumer Finances, the market income of a family is obtained by subtracting from its total gross income the public transfers received by all family members. Note that the total gross income is the sum of all monetary income received by all family members 15 and older.

[22] The results for all years between 1986 and 1996 are also presented in Tables A6-1 and A6-2.

Table 1

Poverty rate based on the income measure
by family type and characteristics of the head of the family, 1986 and 1996

Family types and characteristics of head of family	*Poverty rate (in percentages)*				*Variation in percentage points*	
	Capability		Market income		Capability	Market income
	1986	1996	1986	1996	(1986-1996)	
Family types:						
All families 2+	6.2	7.0	19.3	22.5	+0.8	+3.2
All couples	2.7	2.4	14.8	16.5	-0.3	+1.7
Couples without children	2.0	2.2	12.1	13.9	+0.2	+1.8
Couples with children	3.3	2.6	16.8	18.8	-0.7	+2.0
All lone-parent families	43.6	42.7	60.8	65.1	-0.9	+4.3
Female lone-parent families	47.7	46.3	66.2	69.1	-1.4	+2.9
Other families	8.1	9.5	29.7	30.9	+1.4	+1.2
Age of head of family:						
18-24 years	20.9	32.3	42.9	61.7	+11.4	+18.8
25-34 years	9.4	12.2	21.7	29.1	+2.8	+7.4
35-44 years	5.7	6.6	17.0	21.6	+0.9	+4.6
45-54 years	3.1	3.5	14.1	15.1	+0.4	+1.0
55-64 years	2.6	3.3	19.9	21.7	+0.7	+1.8
Education of head of family:						
Less than 11 years	14.7	21.4	44.4	56.7	+6.7	+12.3
11 to 13 years	6.8	11.4	22.5	33.0	+4.6	+10.5
Partial post-secondary	6.8	11.1	17.1	29.9	+4.3	+12.8
Completed post-secondary	3.6	4.9	11.6	17.8	+1.3	+6.2
University	1.9	1.6	6.0	9.9	-0.3	+3.9

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

4.1.1 By family type

An examination of the results presented in the first section of Table 1 shows that, in 1996, 7 percent of all economic families of two or more persons were capability poor. More than 496,000 families, totalling more than 1.4 million persons, were incapable in that year of achieving economic self-reliance by their own means, even when making full use of their full potential during the year.

As might have been expected, the capability poverty rates were much lower than the observed market income poverty rates. Indeed, the rate based on potential full-time income for all families was slightly less than one-third the market poverty rate, which was at 22.5 percent in 1996.

As we interpret these results, and those that follow, it is important to bear in mind that our measure does not take into consideration general equilibrium effects, that is, the fact that an increase in labour supply resulting from the massive entry of "new" full-time workers in the labour market would put downward pressure on average wages, thereby potentially increasing poverty rates. For this reason, predicted poverty rates must be viewed as under-estimations to a certain degree.[23]

Having established this restriction, it would appear that the difference between the capability poverty rates and the observed market poverty rates is due essentially to the incidence of part-time work, unemployment and periods outside the labour force, which affect the measure of observed market income but do not (or, at least, very little) affect our measure.

One possible interpretation of these initial results, if we want to assume that the general equilibrium effects are not too important, would be that, for a vast majority of non-aged Canadian families, the primary cause of market poverty may be linked to the difficulty of adequate access to the full-time labour market rather than to the inability to generate sufficient income to provide for their basic needs once in the labour market.[24]

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[23] If we accept that the wages of older workers are protected by seniority rules and therefore are relatively stable, this large increase in labour supply should have a greater impact on the wages of young workers than on those of other workers. Note also that within the simple supply and demand framework, age groups for which the relative labour supply is likely to increase the most (for example, the young since relatively few of them actually work full-time, full-year) are also the ones likely to experience the most significant wage decreases. Consequently, the under-estimation of predicted poverty rates could be greater for this age group. I would like to express my special thanks here to Philip Merrigan (Université de Québec à Montréal) and René Morrissette (Statistics Canada) for their valuable help on this issue.

[24] Difficult access to the labour market results as much from factors related to labour demand, such as a limited number of jobs available, as from factors related to labour supply. In the latter case, for example, an individual may have a set of preferences, such that he will choose not to work or to work part time rather than full time. It is also possible that the characteristics of his human capital are such that his access to the labour market is somewhat limited. Our measure assumes a labour market in which all individuals can work full-time, full-year regardless of the nature of their human capital and their preferences.

Capability poverty rates, like those based on observed market income, varied widely by family type (couples with or without children,[25] lone-parent families and other families[26]). The rank order of these various types of families in terms of their poverty rates in this respect, was similar for the two measures. Thus, families generally considered at higher risk of poverty based on their observed market income are also those who appear the most limited in their ability to generate sufficient income even when working full-time, full-year.

The results show first that, in the case of two-parent families, poverty would be virtually eliminated in Canada if all adults worked to their full potential. For example, only 2.2 percent of couples without children (a difference of 11.4 percentage points compared to their observed market poverty rate) did not have the capability or attributes to avoid market poverty through their own efforts in 1996. Comparing their observed and predicted poverty rates with those of all families with two or more persons indicates, moreover, that these couples were relatively less vulnerable to market poverty using our measure over the period. The results for 1996 show that these families were about 3.2 times less likely to live in poverty based on their predicted full-time income than families as a whole, while this risk was only 1.6 times less based on their observed market income.

The same findings apply for couples with children. In effect, these families experienced a capability poverty rate throughout the period that was remarkably similar to that of other couples. In 1996, this rate was 2.6 percent for these families using our measure.

While these very low capability poverty rates appear to reinforce the idea that, for many Canadian families, the problem of market poverty appears to be one of inadequate access to the labour market, the results for lone-parent families indicate that for some families, the problem seems to lie elsewhere.

It is evident, even using our measure, that the capability poverty rate of lone-parent families in general remained quite high during the entire period. Lone-parent families in which the head was a woman (more than 80 percent of lone-parent families with children under 18) stand out in this

[25] Children are defined as members of a family under the age of 18. There may also be children in the family who are older than 18.

[26] The group "other families" is a residual category that includes lone-parent families without children under 18 and families that are not couples but in which there may be children older or younger than 18.

regard with a capability poverty rate that peaked at 46.3 percent in 1996, a reduction of barely one-third of the incidence of poverty compared to their market income.

The relatively more difficult position of lone-parent families compared to other families is confirmed when we examine the disparity between their poverty rate and that, for example, of couples with children, which was even greater using our measure than using their observed market income. Thus, in 1996, female lone-parent families, which were 3.7 times more likely to be poor than couples with children, were 17.8 times more vulnerable to poverty than these latter families using our measure. The precariousness of their situation, even using our measure, suggests at least two possibilities. First, the presence of only one "breadwinner" in a family with at least one dependent child is still, in many cases, far from adequate to generate an income sufficient to meet the basic needs of the family. This finding also, and especially, raises the question of the characteristics of single mothers in terms of their human capital and, in particular, of the return on that capital in the labour market. That would appear to be far too low for the near-majority of these families.

Finally, for the residual group composed of "other families," the capability poverty rates are slightly higher than for the average of all families. In 1996, we note that 9.5 percent of these families did not have the potential to escape poverty if all adults had worked full-time, full-year. This was however an appreciable difference with respect to their observed poverty rate that year, their capability poverty rate being lower by 21.4 percentage points.

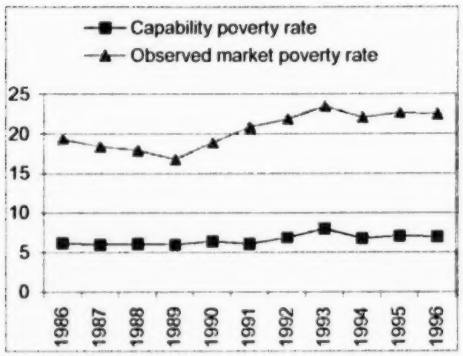
If we take a look at Graphs 1-1 to 1-5 and Columns 6 and 7 in the top section of Table 1, we observe that the capability poverty rates and observed market poverty rates evolved in very different ways over the period in question. Indeed, while the situation for the various family types tended to deteriorate based on their observed market income,[27] it remained relatively stable based on their potential full-time income. This result contrasts with that obtained by Haveman and Bershadker in the American context where these two authors found that the capability poverty rate increased more rapidly than the official poverty rate between 1975 and 1995.

[27] The analysis of observed market poverty rates shows that the situation deteriorated for the four major types of families considered. In each case, rates fell at the end of the 1980s and then increased sharply until 1992-1993. These rates then tended to decline but remained higher than in the mid-1980s. Female lone-parent families and couples with children under 18 were the ones to suffer the most from this deterioration.

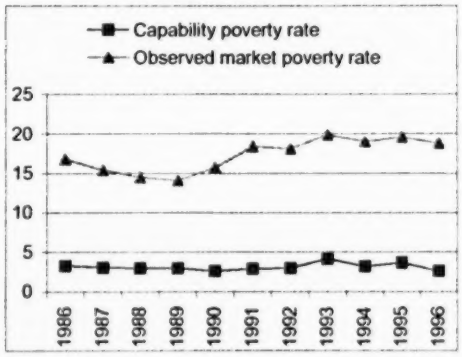
Graph 1

Poverty rates by income measure and by family type, 1986 to 1996

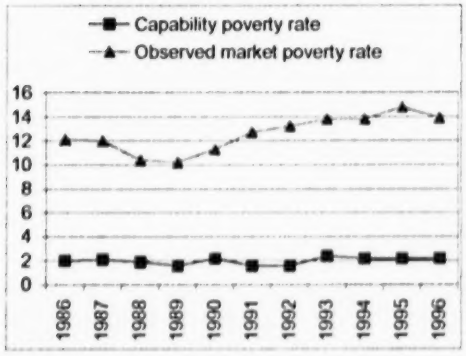
1-1: All families 2+



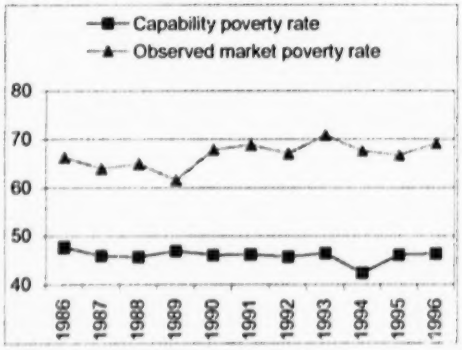
1-2: Couples with children



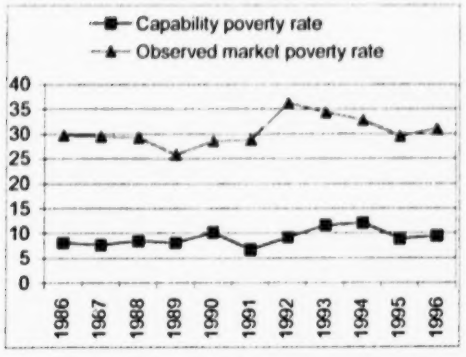
1-3: Couples without children



1-4: Female lone-parent



1-5: Other families



An initial examination of the situation for all families with two or more persons shows that the capability poverty rate never rose above 8.0 percent (the 1993 rate) over the period. From 1986 to 1991, this rate actually hovered between 6.0 and 6.5 percent before settling around 7.0 percent until 1996 (except in 1993). Comparing 1986 and 1996 reinforces this picture of stability in the potential poverty rate for families in general. Between these two years, this rate actually increased only 0.8 percentage points, a situation that contrasts sharply with the rise of 3.2 percentage points in their observed market income poverty rate.[28]

The same stability is generally observed in the capability poverty rate when we consider the various family types separately. For couples with children and for couples without children, the capability poverty rate was content to hover around 3 percent for the first and around 2 percent for the second over the entire period. If we compare 1986 and 1996 only, these two family types experienced a decrease of 0.7 percentage points and an increase of 0.2 percentage points respectively in their capability poverty rates. Such modest variations are again in contrast to the observed variations in their market poverty rates.

As for female lone-parent families, an examination of all years also suggests a certain stability in their situation over the review period. In fact, their potential poverty rate remained around the 46 percent mark, varying by only -0.3 to +0.4 percentage points depending on the year considered. However, two years are exceptions. The first is 1986 when the rate reached its highest level at 47.7 percent and the second is in 1994 when it was at its lowest at 42.3 percent. As for the different family types discussed earlier, the change in the situation of this group contrasts with that observed on the basis of their market income, their poverty rate using this income concept having increased steadily since 1989.

Lastly, for the families in the residual group, we observe a wider variability in the capability poverty rate over the entire period compared with that of other families.[29] A comparison of 1986

[28] We must be cautious in comparing the trends in the poverty rates between the two measures over the period mainly because 1986 and 1996 are not cyclically ideal for comparison purposes. Evidence of this is the employment rates for men 25 to 54 at 86.5 percent in 1986 and 83.1 percent in 1996. All things being equal, the impact on the comparison of the two measures is to upwardly bias the market income poverty rates. The effect on our measure, if any, should be minimal. Consequently, the trend in market poverty rates should always be more upward than that of the predicted rates.

[29] There are few observations for this group, which makes interpreting the capability poverty rates difficult.

and 1996 shows that their poverty increased by 1.4 percentage points, which is reasonably comparable to their observed market poverty rate.

4.1.2 By characteristics of the head of the family

While the incidence of poverty varies by family type considered, the characteristics of the heads of families also had a significant impact on the determination of their economic situation. In this section, we re-examine the capability poverty rates for all non-aged families based on the age and education of their head.[30]

An examination of the results presented in the second section of Table 1 shows that the capability poverty rate, like the observed market income poverty rate, tends, as might be expected, to decline with the age of the head of the family.[31] This trend is explained largely by the fact that younger workers start their careers normally at the bottom of the salary scale and then see their wages increase with experience. However, unlike the observed market income rates, that reveal a reversal of this trend for families where the head was between 55 and 64, the results for capability poverty rates show a steady decline with age.[32]

There were large differences in the poverty rates of younger and older families using our measure, which, moreover, shows an amplified "age effect." The capability to avoid poverty by their own means for families in which the head (i.e. the oldest person in the family) was less than 35 was extremely limited compared with that of economic families in general and especially with that of older families.

In this regard, and despite a large absolute difference with their observed market poverty rate, the situation of families in which the head was less than 25 appeared particularly critical.[33] In 1996, the poverty rate of these youngest families was at 32.3 percent, indicating that they were

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[30] Place of residence, ethnic origin and state of health would also be interesting variables to analyse since they too have a strong influence on poverty levels and trends.

[31] We recoded the age of head variable to reflect the age of the oldest person in each family (and not, for example, the age of the husband which is given by default for two-parent families). Five relatively standard age groups were used to distinguish the families. They are families in which the head was (1) less than 25; (2) between 25 and 34, (3) between 35 and 44, (4) between 45 and 54, and (5) between 55 and 64.

[32] This difference between the two measures is due to the growing incidence of early retirements (voluntary or forced) (and thus generally a loss of income for the older families), which impacts the measure of poverty based on observed market incnome but does not affect our measure.

[33] Note that this is a group of families in which, compared to the other age groups, there is a large proportion of female lone-parent families and families in which one or both parents, as applicable, are often students.

4.6 times more vulnerable to capability poverty than families in general and 9.2 times more at risk than families in which the head was between 45 and 54. On the basis of their observed market income, this risk was comparatively only 2.7 times and 4.1 times higher respectively. As for families in which the head was between 25 and 34, which had a capability poverty rate of 12.2 percent in 1996, the same conclusion holds true although to a lesser degree.

At the other extreme, the capability poverty rates for the older families (3.5 percent in 1996 for families in which the head was between 45 and 54 and 3.3 percent for those in which the head was 55 to 64 in the same year) suggests a certain marginalization of poverty, as with the couples discussed previously, when all adults worked to their full potential. Compared to all economic families, these families appeared even less vulnerable to poverty using our measure than on the basis of their observed market income. For example, using their observed market income in 1996, families in which the head was between 45 and 54 were 1.5 times less likely to be poor than families in general, while they were 2 times less vulnerable using our measure.

The findings on the trends in poverty rates, presented in Columns 6 and 7 of the second section of Table 1 and in Graphs 2-1 to 2-5, indicate that this disparity between the capability poverty rates of the younger and the older families actually widened considerably over the period. This widening of the gap, which was more pronounced than that observed for market poverty rates, is due primarily to a sharp rise, especially in the 1990s, in the predicted poverty rates of the youngest families (and to a lesser degree in that of families in which the head was between 25 and 34).

In the second half of the 1980s, the capability poverty rate of the youngest families fell 3.3 percentage points to 17.6 percent in 1989. However, beginning in 1990, this rate climbed to 26.5 percent and rose steadily until it reached 32.3 percent in 1996. A comparison of the figures in 1986 and 1996 clearly shows this deterioration in their situation. In total, their capability poverty rate increased 11.4 percentage points, an increase that, while impressive, was still below the 18.8 percentage point increase in their observed market poverty rate.[34,35]

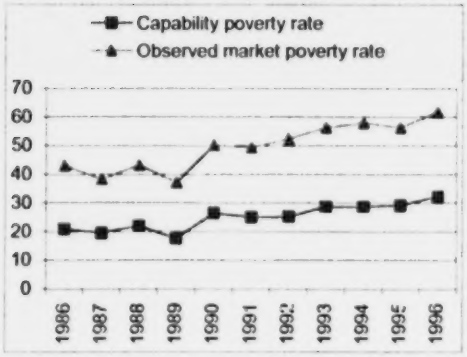
[34] The deterioration in the situation of the youngest families appears to be due mainly to a composition effect. The proportion of families with a young head decreased over time and such families are increasingly headed by a single mother. Lastly, more and more young people are deciding to stay in school longer.

[35] For families in which the head was between 25 and 34, the capability poverty rate rose 2.8 percentage points over the entire period. Based on their observed market income, this increase was 7.4 percentage points.

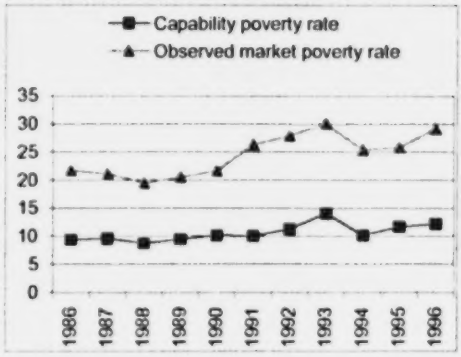
Graph 2

Poverty rate by income measure and by age of the head of the family, 1986 to 1996

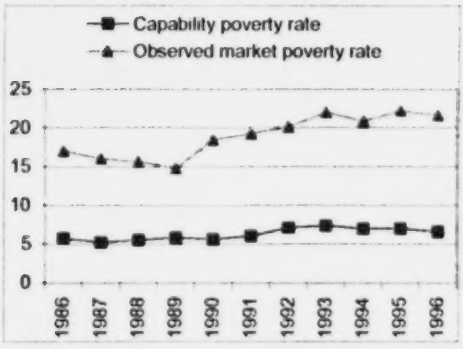
2-1: 18 to 24 years



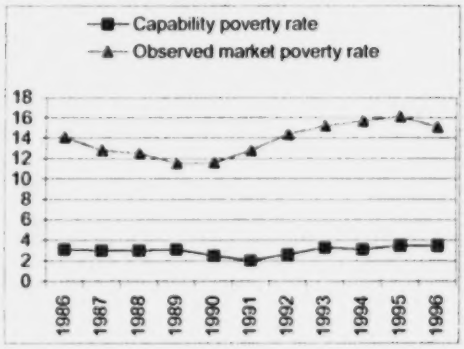
2-2: 25 to 34 years



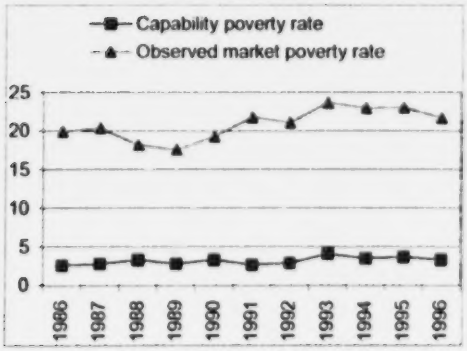
2-3: 35 to 44 years



2-4: 45 to 54 years



2-5: 55 to 64 years



As for older families, a comparison of 1986 and 1996 shows that, depending on the age group considered, capability poverty rates actually increased only between 0.4 and 0.9 percentage points over the entire period. An examination of Graphs 2-3 to 2-5 confirms the overall stability in their respective situations over time but also reveals that these trends contrast, once again, with those for market poverty rates. Based on this income concept, all of these families experienced a relatively severe deterioration in their situation.

The results presented in the last section of Table 1 show that education was also a considerable factor in the economic status of families.[36] These results were expected in that in general the poverty rate declines as the education level of the head of the family increases.

The disparities between the poverty rates of families at the different education levels were generally quite large, especially in terms of their potential full-time income. Compared with families in which the head (i.e. the person with the most schooling in the family) had university level education, those in which the head had partial post-secondary education or less appeared to be relatively more vulnerable to poverty than they were based on their observed market income.

Families in which the head had less than 11 years of formal education displayed extreme vulnerability over the period. In 1996, their capability poverty rate, which was at 21.4 percent,[37] implied that they were 10.6 times more vulnerable to market poverty than families in the university education group. By comparison, their degree of vulnerability in relation to the families with the most schooling was only 5.8 times higher based on their observed market income.

Conversely, the findings for families in which the head had completed post-secondary schooling, and especially for those in the university education group, were similar to those for the oldest families and for couples with or without children. In 1996, only 1.6 percent of families in which the head had a university education was unable to provide for their basic needs, when making full

[36] As with the "age of head" variable, we also recoded the variable for the education level of the head of the family so that it reflects the education of the most educated person in each family. Five education categories were used to distinguish the families: (1) less than 11 years of schooling; (2) between 11 and 13 years; (3) partial post-secondary education; (4) completed post-secondary education; and (5) university education.

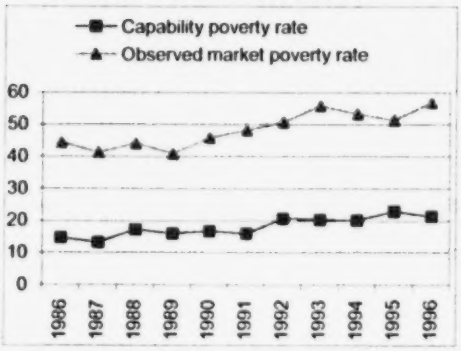
[37] With a drop of 35.3 percentage points in absolute terms compared to their observed market poverty rate in that year, the capability poverty rate of families in which the head had little schooling may appear relatively low. It is important to understand that, in general, these families are older, which tends to cloud to some degree the effect of such an education level on their poverty rate. A possible solution to this problem would be to redo the analysis excluding families in which the head was between 55 and 64, for example.

use of their potential. Compared with families in general, this rate represented a risk of poverty 3.6 times lower. Based on their observed market income, this risk was only 2.4 times lower.

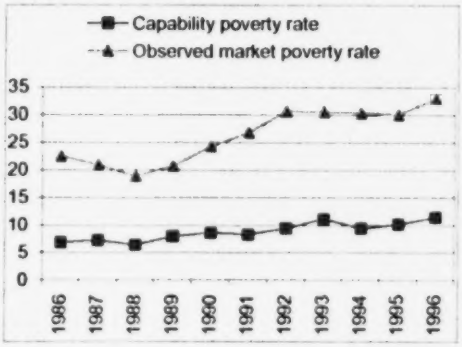
Graph 3

Poverty rate by income measure and by level of education of the head of the family, 1986 to 1996

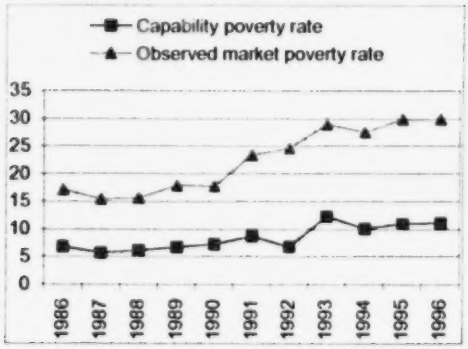
3-1: Less than 11 years



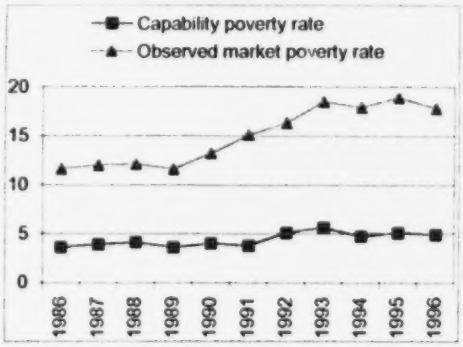
3-2: 11 to 13 years



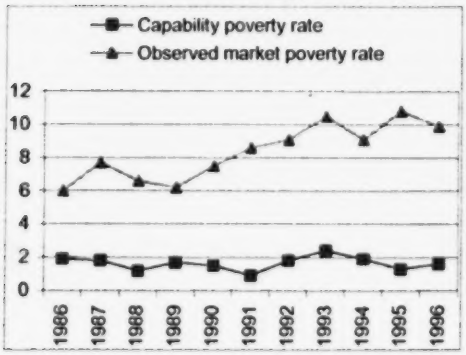
3-3: Partial post-secondary



3-4: Completed post-secondary



3-5: University



The findings on the trends in capability poverty rates by education group, presented in Graphs 3-1 to 3-5 and in Columns 6 and 7 of the last section of Table 1, must be interpreted cautiously.[38]

Nevertheless, it is possible to see that, except for families in which the head had a university education, all of the families in the other education groups experienced a more or less severe deterioration in their situation based on their potential full-time income over the period. For families in which the head had partial post-secondary schooling or less, the rises in their capability poverty rates – which occurred mainly in the 1990s – were quite similar overall with the shifts ranging from 4.3 percentage points to 6.7 percentage points between 1986 and 1996. While substantial, these increases were still well below those of their observed market income poverty rates.[39]

As for families in which the head had a university education, they experienced a relatively stable situation over the years. In general, their poverty rate held steady around 2.0 percent throughout the entire period. A comparison of 1986 and 1996 reinforces this impression of stability as it shows a drop of 0.3 percentage points which, once again, varies considerably from the increase of 3.9 percentage points in their observed market poverty rate.

4.2 Composition of the population of capability-poor families

We will now complete our analysis of capability poverty by examining the characteristics of the population of capability-poor families based on their potential to generate full-time income. As we did in our analysis of poverty rates, we will continue to point out the main differences between our measure and that based on market income. Table 2, which has the same layout as Table 1, contains our findings.[40]

[38] We need to be careful when analysing trends in the poverty rates by education group because of the change that was made in 1989 in the education variable in the Survey of Consumer Finances. This change reduces the reliability of comparisons between 1986-1988 and 1989-1996 and makes interpretation more difficult.

[39] Families in which the head had completed post-secondary education also experienced an increase in their capability poverty rates, again mainly in the 1990s. The increase was quite modest overall, being +1.3 percentage points between 1986 and 1996.

[40] The findings for all years are presented in Tables A7-1 and A7-2.

Table 2

Composition of poor families based on the income measure
by family type and characteristics of the head of the family, 1986 and 1996 (1996$)

Family type and characteristics of head of the family	*Composition*				*Absolute change* (1986-1996)	
	Capability		Market income			
	1986	1996	1986	1996	Capability	Market income
Family types:						
Couples without children	11.8	12.2	22.8	24.0	+0.4	+1.2
Couples with children	26.0	16.4	43.1	36.8	-9.6	-6.3
All lone-parent families	53.7	61.6	24.2	29.3	+7.9	+5.1
Other families	8.5	9.8	10.0	9.5	+1.3	-0.5
Age of head of family:						
18-24 years	14.5	12.4	9.6	7.4	-2.1	-2.2
25-34 years	40.0	35.1	29.8	26.0	-4.9	-3.8
35-44 years	27.2	30.6	26.1	31.1	+3.4	+5.0
45-54 years	10.4	13.2	15.1	18.0	+2.8	+2.9
55-64 years	7.9	8.7	19.3	17.6	+0.8	-1.7
Education of head of family:						
Less than 11 years	31.6	22.2	30.7	18.3	-9.4	-20.2
11 to 13 years	37.7	29.4	40.5	26.2	-8.3	-3.5
Partial post-secondary	13.2	13.8	10.6	11.6	+0.6	+1.5
Completed post-secondary	11.3	28.9	11.8	33.1	+17.6	+19.1
University	6.2	5.7	6.3	10.8	-0.5	+3.2

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

4.2.1 By family type

An examination of the results by family structure of the capability-poor population, presented in the first section of Table 2, shows that lone-parent families were the largest group within this population over the period. Indeed, 61.6 percent of capability-poor families were lone-parent families in 1996, a proportion that rose by 7.9 percentage points from 1986.

A comparison of the family structure of the poor population based on market income illustrates the degree to which these lone-parent families were over-represented in the capability-poor population. In 1996, the proportion of these families was indeed slightly more than twice as high as the proportion that they represented in the population of poor families based on observed market income, which was 29.3 percent.

The opposite situation exists for couples with or without children, the latter having represented respectively 16.4 percent and 12.2 percent of all families with poor potential in 1996, while their respective share of the population of market income - poor families was 36.8 percent and 24.0 percent that same year.

As for the changes in the family structures of the two poor populations, we observe that they generally evolved in the same way. For example, the increase noted above in terms of the share of the population of capability-poor families held by lone-parent families also occurred in the population of families poor on the basis of their observed market income, but to a lesser degree since the latter increase was only 5.1 percentage points between 1986 and 1996.

For couples, there was a similar trend in the two measures since, within the two poor populations, the relative shares of the population represented by couples with and without children moved much closer together. This movement, which was greater in the case of the capability-poor population, was due mainly to a sharp decline in the proportion of couples with children in that population. Thus, between 1986 and 1996, the percentage of capability-poor families represented by these couples fell 9.6 percentage points, while that of couples without children remained relatively stable, climbing slightly by 0.4 percentage points. Within the population of market income-poor families, these changes were -6.3 and +1.2 percentage points respectively.

As for the "other families," the relative percentage that they represented in each of the poor populations moved closer together over the years. As shown in Table 2, they accounted for very similar shares of the populations in 1996.

4.2.2 By characteristics of the head of the family

An examination of the age structure of the population of capability-poor families in the second section of Table 2 indicates that these families were relatively young. In 1996, almost half of these families (47.5 percent) were actually headed by a person younger than 35, while less than a quarter of them had a head older than 44.

A comparison of the age structures of the two poor populations reveals, as with lone-parent families, that the youngest families were over-represented in the population of capability-poor families. In contrast, older families were largely under-represented. The findings for 1996 show

that the proportion of families in the capability-poor population in which the head was younger than 25 was about 68 percent higher than the proportion of these families in the population of market income-poor families. For families in which the head was between 45 and 54, this proportion was, in contrast, 27 percent lower.

The evolution in age structures over the years was qualitatively of the same order for the two measures. In both cases, the percentage of poor families in which the head was younger than 35 fell between 1986 and 1996, no doubt reflecting the aging of the population. Thus, while capability-poor families mostly had heads younger than 35 at the beginning of the period, the majority of them (52.5 percent) had a head who was at least 35 years in 1996, an increase of 7 percentage points from 1986.[41]

Lastly, in the case of the education structure of poor families, we see that it is families in which the head was among the least educated that accounted for the majority of families in the population of capability-poor families. In 1996, 51.6 percent of all capability-poor families had a head that had the equivalent of 13 years or less of schooling. In contrast, only 5.7 percent of these poor families had heads with a university education.

Compared to the population of market income-poor families, the families in which the head had less schooling and those in which the head had a partial post-secondary education tended in general to have been over-represented in the capability-poor population. The opposite was true for the more educated families and especially for those in which the head had a university education. For example, families in which the head had fewer than 11 years of formal education in 1996 accounted for a proportion of the population of capability-poor families that was 21.3 percent higher than their corresponding proportion of poor families based on market income. In the case of families in which the head had a university education, they held a percentage of the capability-poor population in the same year that was, in contrast, 47.2 percent lower than their representation in the observed market income poor population.

As for the changes that occurred in the education structure of the population of poor families, they are difficult to interpret due to changes made in the definition of the education variable in

[41] The impact of the aging of the population was to reduce the differences between the two measures in terms of the age structure. Families poor on the basis of their market income were continuously headed by an individual of at least 35.

the SCF.[42] We can see, however, that the proportion of capability-poor families represented by those with a less-educated head tended to decrease over time but, nevertheless, remained a majority of this population. This trend, which reflects the rise in the education level of the population overall, was, however, less pronounced in the observed market income-poor population where these families gradually became a minority. Thus, while the proportion of capability-poor families represented by families in which the head had less than 11 years of formal education fell 9.4 percentage points between 1986 and 1996, the decline was 12.4 percentage points using the other measure. Similarly, for families in which the head had 11 to 13 years of schooling, the decrease was 8.3 percentage points in the capability-poor population, but 14.3 percentage points in the population of families poor based on observed market income.

In contrast, the proportion of families in which the head had completed post-secondary education increased the most in the population of capability-poor population over the period. This increase was 17.6 percentage points between 1986 and 1996, slightly less than the 21.3 percentage points that their proportion rose in the population of market income-poor families. As for families in which the head had a university education, there was little change in their representation in capability-poor families, a situation that contrasts, but only slightly, with that within the population of families poor based on their observed market income.

[42] See Note 12.

5. Conclusion

Our goal with this analysis was to paint a picture of the ability of non-aged families to generate market income in Canada between 1986 and 1996. To this end, we used a measure of the potential of each adult in a given family to generate annual earnings assuming full-time, full-year employment. A number of adjustments were made in the measure to take into account the fact that some individuals were unable to work full-time, full-year because they were students or because they suffered from a disability that prevented them from working. Investment and other monetary income from non-government sources were then added to the predicted full-time annual earnings of the families.

The main findings were:

- Predicted poverty rates were, as might have been expected, much lower than the actual observed poverty rates based on market income. For all non-aged economic families, for example, the capability-poor rates amounted to approximately one-third of the market income poverty rate in 1996.

- Capability poverty rates varied widely depending of the family type considered and the characteristics of the head. In the case of couples with or without children, older families and those in which the head had at least completed post-secondary education, capability poverty rates were very low over the entire period. For these families, it would appear that, all other things being equal, adequate access to the full-time, full-year labour market minimized market poverty in Canada. In contrast, the problem is quite different for the youngest families, for those in which the head had little schooling and for lone-parent families. Their capability poverty rates were very high both in absolute terms and in relation to the other types of families and reinforce the idea that there is a lack of human capital or at least of an inadequate return on that capital in the labour market.

- The findings on the trends in capability poverty rates indicate that these rates were much more stable than the market income poverty rates. The fact that observed market poverty rates are based on actual income flow and that our measure reflects, to some degree, the more permanent characteristics of the families no doubt partly explains this difference. Some exceptions were noted however.

- The characteristics of capability-poor families were different from those of the population of the families poor on the basis of their market income. In particular, the proportion of families with poor potential consisting of lone-parent families, as well as younger and less educated families, was much larger than that of families poor on the basis of their market income.

- As for the evolution in the composition of the population of capability-poor families over the years, it shows, on the one hand, that lone-parent families represented a larger and larger share of this population. On the other hand, it also shows that this population aged and became more educated but, in both cases, to a lesser degree than in the population of families poor based on their observed market income.

These results carry significant policy implications. In particular, they highlight the extent to which it is important to take into account both components of the labour market, namely, supply and demand, depending on the characteristics of the individual and of the family. Initiatives such as investing in the accumulation of knowledge, continuous learning and employability programs and other policies aimed at generating better wages, such as income supplements and increasing the minimum wage, would all be appropriate to reduce poverty among lone-parent families, young families and families in which the head has little schooling. For other types of families – couples with or without children, older families and those in which the head is more educated – policies focused on demand and the creation of stable jobs would enable many to generate enough income to provide for their own needs.

Appendix

Appendix Table A1

Definition of variables

Variables	*Definitions*
Age	Individual's age.
Age squared	Individual's age squared.
Educ2 – Educ5	Dichotomic variable showing the individual's number of years of education: less than 11 years of schooling is the reference category; Educ2 if 11 to 13 years of primary and secondary schooling; Educ3 if partial post-secondary studies; Educ4 if post-secondary certificate or diploma; Educ5 if university diploma.
Nchil18*	Number of single children under 18 in the family.
Chil7*	Dichotomic variable indicating the presence of children under 7 years in the family: 1 if at least one child; 0 if none.
Mar	Dichotomic variable indicating marital status: 1 if married; 0 if not.
Imm	Dichotomic variable indicating immigration status: 1 if born in Canada; 0 if not.
Urb1 – Urb4	Dichotomic variable indicating the size of the region of residence: Rural region is the reference category; Urb1 if region has 500,000 or more inhabitants; Urb2 if the region has between 100,000 and 499,999 inhabitants; Urb3 if between 30,000 and 99,999 inhabitants; Urb4 if region has fewer than 30,000 inhabitants.
Nfld - BC	Dichotomic variable indicating the province of residence: Ontario is the reference category.

Note: Variables with an asterix appear only in the probit equations on full-time full-year participation in the labour market.

Appendix Table A2

Results: Probit on probability of working full-time, full-year

Women – 1986 to 1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Constant	-3.082	-3.136	-3.328	-3.322	-3.396	-3.705	-3.842	-3.805	-4.154	-3.984	-4.133
	(-0.109)	(-0.095)	(-0.104)	(-0.099)	(-0.095)	(-0.102)	(-0.108)	(-0.110)	(-0.108)	(-0.116)	(-0.117)
Age	0.159	0.165	0.178	0.177	0.173	0.186	0.188	0.183	0.201	0.193	0.194
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Age square	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.003	-0.003	-0.003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Educ2	0.465	0.478	0.489	0.486	0.465	0.537	0.539	0.547	0.531	0.509	0.517
	(0.024)	(0.021)	(0.023)	(0.023)	(0.022)	(0.024)	(0.025)	(0.026)	(0.026)	(0.028)	(0.029)
Educ3	0.554	0.493	0.495	0.507	0.617	0.597	0.625	0.578	0.536	0.538	0.582
	(0.036)	(0.032)	(0.034)	(0.034)	(0.032)	(0.034)	(0.036)	(0.037)	(0.036)	(0.039)	(0.038)
Educ4	0.657	0.711	0.674	0.703	0.749	0.737	0.76	0.739	0.733	0.722	0.749
	(0.029)	(0.025)	(0.027)	(0.023)	(0.023)	(0.024)	(0.026)	(0.026)	(0.026)	(0.028)	(0.028)
Educ5	0.808	0.865	0.847	0.881	0.871	1.008	1.011	1.009	0.962	0.937	0.973
	(0.034)	(0.030)	(0.031)	(0.032)	(0.031)	(0.032)	(0.033)	(0.033)	(0.031)	(0.034)	(0.033)
Nchil18	-0.251	-0.261	-0.249	-0.249	-0.22	-0.229	-0.215	-0.228	-0.223	-0.212	-0.2
	(-0.012)	(-0.010)	(-0.011)	(-0.010)	(-0.010)	(-0.010)	(-0.010)	(-0.010)	(-0.010)	(-0.011)	(-0.011)
Chil7	-0.22	-0.25	-0.251	-0.26	-0.274	-0.287	-0.247	-0.222	-0.219	-0.208	-0.142
	(-0.027)	(-0.024)	(-0.025)	(-0.024)	(-0.023)	(-0.024)	(-0.025)	(-0.026)	(-0.025)	(-0.028)	(-0.027)
Mar	-0.181	-0.162	-0.171	-0.122	-0.046	-0.018	-0.024	-0.001	0.033	-0.023	0.019
	(-0.022)	(-0.019)	(-0.021)	(-0.020)	(-0.019)	(-0.020)	(-0.021)	(-0.020)	(0.020)	(-0.022)	(0.021)
Imm	0.033	0.014	0.03	-0.053	-0.075	-0.031	-0.053	-0.102	-0.055	-0.093	-0.083
	(0.030)	(0.027)	(0.029)	(-0.028)	(-0.027)	(-0.028)	(-0.029)	(-0.030)	(-0.025)	(-0.028)	(-0.028)
Urb1	0.286	0.246	0.268	0.334	0.29	0.264	0.231	0.289	0.207	0.237	0.26
	(0.029)	(0.025)	(0.027)	(0.027)	(0.026)	(0.027)	(0.028)	(0.028)	(0.027)	(0.029)	(0.028)
Urb2	0.213	0.127	0.19	0.215	0.219	0.193	0.18	0.187	0.151	0.18	0.139
	(0.036)	(0.029)	(0.031)	(0.025)	(0.024)	(0.025)	(0.026)	(0.026)	(0.026)	(0.027)	(0.027)

Appendix Table A2 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Urb3	0.164	0.142	0.073	0.184	0.14	0.143	0.117	0.053	0.074	0.167	0.152
	(0.029)	(0.028)	(0.029)	(0.029)	(0.029)	(0.030)	(0.031)	(0.031)	(0.036)	(0.036)	(0.035)
Urb4	0.179	0.159	0.146	0.164	0.177	0.094	0.127	0.107	0.141	0.144	0.13
	(0.027)	(0.022)	(0.025)	(0.023)	(0.022)	(0.023)	(0.024)	(0.024)	(0.028)	(0.030)	(0.029)
Nfld	-0.36	-0.451	-0.369	-0.41	-0.37	-0.386	-0.426	-0.311	-0.229	-0.382	-0.464
	(-0.047)	(-0.034)	(-0.042)	(-0.040)	(-0.032)	(-0.041)	(-0.044)	(-0.043)	(-0.046)	(-0.052)	(-0.051)
PEI	0.012	-0.16	-0.145	-0.132	-0.082	-0.112	-0.126	-0.094	-0.044	-0.114	-0.022
	(0.059)	(-0.041)	(-0.054)	(-0.056)	(-0.041)	(-0.054)	(-0.055)	(-0.056)	(-0.057)	(-0.059)	(-0.056)
NS	-0.209	-0.152	-0.181	-0.219	-0.154	-0.196	-0.249	-0.164	-0.24	-0.241	-0.195
	(-0.041)	(-0.036)	(-0.037)	(-0.035)	(-0.034)	(-0.035)	(-0.037)	(-0.036)	(-0.036)	(-0.039)	(-0.038)
NB	-0.126	-0.236	-0.305	-0.236	-0.204	-0.113	-0.103	-0.14	-0.129	-0.12	-0.153
	(-0.040)	(-0.036)	(-0.037)	(-0.036)	(-0.035)	(-0.035)	(-0.037)	(-0.037)	(-0.037)	(-0.040)	(-0.039)
Que	-0.182	-0.219	-0.24	-0.188	-0.171	-0.159	-0.168	-0.123	-0.152	-0.17	-0.157
	(-0.031)	(-0.027)	(-0.029)	(-0.024)	(-0.024)	(-0.024)	(-0.025)	(-0.025)	(-0.024)	(-0.026)	(-0.026)
Man	0.009	-0.052	-0.022	-0.004	-0.078	-0.058	0.018	0.018	0.04	0.021	0.053
	(0.041)	(-0.036)	(-0.037)	(-0.037)	(-0.034)	(-0.037)	(0.039)	(0.039)	(0.035)	(0.038)	(0.038)
Sask	0.041	-0.006	-0.033	-0.031	0.021	0.132	0.062	0.088	0.085	0.089	0.144
	(0.037)	(-0.034)	(-0.036)	(-0.035)	(0.033)	(0.035)	(0.037)	(0.036)	(0.038)	(0.041)	(0.041)
Alta	-0.029	-0.111	-0.064	-0.106	-0.038	-0.031	-0.017	-0.009	0.018	0.083	-0.007
	(-0.032)	(-0.029)	(-0.030)	(-0.031)	(-0.031)	(-0.032)	(-0.033)	(-0.033)	(0.033)	(0.037)	(-0.036)
BC	-0.257	-0.336	-0.261	-0.258	-0.227	-0.201	-0.161	-0.047	-0.071	-0.102	-0.178
	(-0.036)	(-0.032)	(-0.033)	(-0.032)	(-0.031)	(-0.032)	(-0.033)	(-0.033)	(-0.031)	(-0.034)	(-0.033)
No. obs.	22,681	30,359	26,155	28,184	31,028	28,081	25,799	25,854	26,497	22,841	23,617

Source: Author's calculations using the public use microdata files of the Survey of Consumer Finances (files of individuals aged 15 years or older), 1986-1996

Note: Standard deviations in brackets.

Appendix Table A3

Results: Full-time, full-year earnings equations

Women – 1986 to 1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Constant	8.291	8.571	8.57	8.642	8.681	8.687	8.603	8.987	8.914	8.36	8.673
	(0.119)	(0.101)	(0.107)	(0.102)	(0.106)	(0.105)	(0.121)	(0.116)	(0.124)	(0.134)	(0.143)
Age	0.06	0.047	0.048	0.051	0.051	0.054	0.056	0.045	0.051	0.066	0.057
	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Age square	-0.001	-0.001	0	-0.001	-0.001	-0.001	-0.001	0	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Educ2	0.176	0.157	0.175	0.169	0.185	0.14	0.206	0.117	0.096	0.215	0.139
	(0.023)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.022)	(0.022)	(0.023)	(0.024)	(0.025)
Educ3	0.253	0.26	0.298	0.213	0.224	0.238	0.265	0.225	0.165	0.312	0.199
	(0.030)	(0.026)	(0.026)	(0.026)	(0.026)	(0.025)	(0.028)	(0.027)	(0.027)	(0.029)	(0.030)
Educ4	0.37	0.329	0.367	0.327	0.348	0.321	0.372	0.283	0.23	0.377	0.26
	(0.028)	(0.024)	(0.024)	(0.022)	(0.023)	(0.022)	(0.025)	(0.024)	(0.025)	(0.026)	(0.028)
Educ5	0.624	0.686	0.706	0.716	0.703	0.683	0.749	0.639	0.564	0.733	0.612
	(0.031)	(0.027)	(0.026)	(0.026)	(0.027)	(0.027)	(0.030)	(0.029)	(0.029)	(0.031)	(0.033)
Mar	-0.027	-0.033	-0.011	-0.039	0	-0.011	-0.01	-0.004	-0.012	-0.009	-0.012
	(-0.017)	(-0.014)	(-0.014)	(-0.013)	(0.012)	(-0.012)	(-0.012)	(-0.012)	(-0.011)	(-0.013)	(-0.012)
Imm	-0.089	-0.149	-0.06	-0.068	-0.027	-0.048	-0.072	-0.08	-0.092	-0.127	-0.092
	(-0.021)	(-0.019)	(-0.019)	(-0.018)	(-0.018)	(-0.017)	(-0.018)	(-0.018)	(-0.015)	(-0.017)	(-0.017)
Urb1	0.162	0.158	0.148	0.125	0.128	0.132	0.159	0.082	0.111	0.154	0.162
	(0.022)	(0.019)	(0.019)	(0.019)	(0.019)	(0.017)	(0.018)	(0.017)	(0.017)	(0.018)	(0.018)
Urb2	0.109	0.062	0.094	0.062	0.086	0.092	0.095	0.056	0.119	0.116	0.107
	(0.027)	(0.021)	(0.021)	(0.017)	(0.017)	(0.016)	(0.016)	(0.016)	(0.017)	(0.017)	(0.017)
Urb3	0.075	0.118	0.078	0.042	0.066	0.072	0.08	0.031	0.069	0.084	0.094
	(0.022)	(0.020)	(0.020)	(0.020)	(0.020)	(0.019)	(0.020)	(0.019)	(0.023)	(0.023)	(0.022)
Urb4	0.01	0.083	0.054	0.026	0.018	0.07	0.047	0.024	0.033	0.029	0.061
	(0.021)	(0.017)	(0.018)	(0.017)	(0.016)	(0.015)	(0.016)	(0.015)	(0.018)	(0.019)	(0.018)

Appendix Table A3 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Nfld	-0.07	-0.15	-0.098	-0.055	-0.074	-0.136	-0.126	-0.235	-0.129	-0.18	-0.146
	(-0.039)	(-0.028)	(-0.032)	(-0.031)	(-0.024)	(-0.029)	(-0.032)	(-0.029)	(-0.030)	(-0.036)	(-0.037)
PEI	0.002	-0.085	-0.13	-0.071	-0.093	-0.076	-0.09	-0.169	-0.126	-0.229	-0.153
	(0.043)	(-0.030)	(-0.037)	(-0.039)	(-0.029)	(-0.034)	(-0.035)	(-0.035)	(-0.035)	(-0.037)	(-0.033)
NS	-0.066	-0.134	-0.077	-0.138	-0.096	-0.166	-0.185	-0.225	-0.163	-0.21	-0.211
	(-0.031)	(-0.026)	(-0.026)	(-0.024)	(-0.024)	(-0.022)	(-0.024)	(-0.022)	(-0.024)	(-0.025)	(-0.024)
NB	-0.066	-0.12	-0.057	-0.129	-0.133	-0.156	-0.178	-0.262	-0.206	-0.2	-0.126
	(-0.029)	(-0.026)	(-0.026)	(-0.025)	(-0.025)	(-0.021)	(-0.023)	(-0.023)	(-0.023)	(-0.024)	(-0.024)
Que	-0.018	-0.028	-0.041	-0.09	-0.064	-0.094	-0.119	-0.119	-0.124	-0.117	-0.074
	(-0.022)	(-0.019)	(-0.019)	(-0.016)	(-0.016)	(-0.015)	(-0.016)	(-0.015)	(-0.015)	(-0.016)	(-0.016)
Man	-0.096	-0.08	-0.077	-0.129	-0.129	-0.118	-0.177	-0.178	-0.136	-0.189	-0.144
	(-0.028)	(-0.025)	(-0.024)	(-0.023)	(-0.023)	(-0.022)	(-0.023)	(-0.023)	(-0.020)	(-0.022)	(-0.021)
Sask	-0.061	-0.119	-0.081	-0.107	-0.156	-0.195	-0.225	-0.197	-0.191	-0.173	-0.126
	(-0.026)	(-0.023)	(-0.023)	(-0.023)	(-0.022)	(-0.020)	(-0.022)	(-0.021)	(-0.023)	(-0.024)	(-0.023)
Alta	-0.002	-0.032	-0.014	-0.075	-0.078	-0.112	-0.117	-0.104	-0.128	-0.149	-0.138
	(-0.022)	(-0.019)	(-0.019)	(-0.020)	(-0.020)	(-0.018)	(-0.019)	(-0.019)	(-0.019)	(-0.021)	(-0.020)
BC	0.033	-0.001	-0.039	-0.016	0.002	-0.022	-0.041	-0.077	-0.013	0.058	0.042
	(0.026)	(-0.023)	(-0.022)	(-0.021)	(0.021)	(-0.020)	(-0.020)	(-0.019)	(-0.018)	(0.020)	(0.020)
Lambda	-0.151	-0.101	-0.144	-0.14	-0.151	-0.145	-0.098	-0.149	-0.207	-0.057	-0.128
	(-0.037)	(-0.030)	(-0.031)	(-0.030)	(-0.030)	(-0.028)	(-0.032)	(-0.030)	(-0.032)	(-0.035)	(-0.038)
R2	0.184	0.187	0.211	0.193	0.18	0.236	0.235	0.233	0.216	0.25	0.227
Reg.corr.S.D.	0.594	0.575	0.563	0.568	0.577	0.521	0.522	0.51	0.543	0.504	0.505
No. obs.	8,163	10,723	9,882	11,333	12,145	11,035	10,149	10,044	10,925	9,243	9,430

Source: Author's calculations using the public use microdata files of the Survey of Consumer Finances (files of individuals aged 15 years and older), 1986-1996

Note: Corrected standard deviations in brackets.

Appendix Table A4

Results: Probit on probability of working full-time, full-year

Men – 1986 to 1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Constant	-3,438	-3,469	-3,487	-3,521	-3,562	-3,742	-3,764	-3,578	-3,897	-3,910	-3,981
	(-0.111)	(-0.097)	(-0.105)	(-0.100)	(-0.095)	(-0.101)	(-0.108)	(-0.107)	(-0.106)	(-0.114)	(-0.114)
Age	0.173	0.175	0.177	0.182	0.176	0.176	0.176	0.177	0.183	0.187	0.186
	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)
Age square	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Educ2	0.459	0.47	0.524	0.468	0.468	0.515	0.488	0.452	0.491	0.506	0.491
	(0.024)	(0.021)	(0.023)	(0.024)	(0.022)	(0.023)	(0.025)	(0.025)	(0.026)	(0.028)	(0.028)
Educ3	0.51	0.514	0.505	0.448	0.521	0.522	0.458	0.346	0.423	0.456	0.449
	(0.038)	(0.033)	(0.036)	(0.036)	(0.034)	(0.036)	(0.037)	(0.038)	(0.037)	(0.041)	(0.040)
Educ4	0.619	0.599	0.651	0.564	0.635	0.588	0.565	0.518	0.541	0.581	0.577
	(0.033)	(0.028)	(0.030)	(0.024)	(0.023)	(0.024)	(0.025)	(0.025)	(0.025)	(0.027)	(0.027)
Educ5	0.807	0.868	0.834	0.822	0.917	0.978	0.966	0.924	0.91	0.871	0.823
	(0.036)	(0.032)	(0.034)	(0.035)	(0.033)	(0.033)	(0.034)	(0.034)	(0.032)	(0.035)	(0.034)
Nchil18	0.031	0.032	-0.003	0.035	0.017	0.016	0.013	0.052	0.03	0.021	0.02
	(0.013)	(0.011)	(0.012)	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)
Chil7	-0.023	-0.088	0.004	-0.055	-0.106	-0.065	-0.045	-0.093	-0.082	-0.079	-0.046
	(-0.031)	(-0.027)	(0.030)	(-0.029)	(-0.027)	(-0.028)	(-0.029)	(-0.030)	(-0.030)	(-0.033)	(-0.032)
Mar	0.47	0.473	0.466	0.452	0.459	0.476	0.47	0.449	0.479	0.545	0.48
	(0.027)	(0.023)	(0.025)	(0.024)	(0.023)	(0.023)	(0.024)	(0.024)	(0.024)	(0.026)	(0.025)
Imm	-0.04	-0.067	-0.073	-0.078	-0.09	-0.092	-0.104	-0.104	-0.103	-0.154	-0.079
	(-0.033)	(-0.029)	(-0.032)	(-0.031)	(-0.030)	(-0.029)	(-0.031)	(-0.032)	(-0.028)	(-0.031)	(-0.031)
Urb1	0.224	0.274	0.242	0.293	0.201	0.163	0.197	0.145	0.256	0.183	0.247
	(0.031)	(0.028)	(0.029)	(0.029)	(0.028)	(0.028)	(0.030)	(0.030)	(0.029)	(0.030)	(0.030)
Urb2	0.203	0.309	0.257	0.29	0.264	0.207	0.236	0.208	0.218	0.194	0.226
	(0.039)	(0.031)	(0.033)	(0.027)	(0.026)	(0.026)	(0.028)	(0.028)	(0.027)	(0.029)	(0.028)

Appendix Table A4 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Urb3	0.259	0.227	0.117	0.24	0.18	0.2	0.168	0.12	0.199	0.242	0.228
	(0.031)	(0.030)	(0.031)	(0.032)	(0.031)	(0.031)	(0.032)	(0.032)	(0.038)	(0.038)	(0.037)
Urb4	0.184	0.255	0.254	0.24	0.219	0.206	0.168	0.201	0.236	0.172	0.209
	(0.027)	(0.023)	(0.026)	(0.025)	(0.023)	(0.024)	(0.025)	(0.025)	(0.029)	(0.031)	(0.030)
Nfld	-0.918	-0.858	-0.77	-0.953	-0.8	-0.747	-0.739	-0.725	-0.622	-0.949	-0.826
	(-0.046)	(-0.035)	(-0.043)	(-0.040)	(-0.033)	(-0.040)	(-0.044)	(-0.044)	(-0.047)	(-0.053)	(-0.052)
PEI	-0.525	-0.518	-0.495	-0.578	-0.431	-0.418	-0.318	-0.377	-0.315	-0.474	-0.31
	(-0.061)	(-0.045)	(-0.058)	(-0.060)	(-0.044)	(-0.057)	(-0.058)	(-0.060)	(-0.060)	(-0.062)	(-0.060)
NS	-0.429	-0.341	-0.237	-0.468	-0.245	-0.327	-0.368	-0.385	-0.342	-0.44	-0.381
	(-0.042)	(-0.039)	(-0.041)	(-0.037)	(-0.037)	(-0.037)	(-0.039)	(-0.038)	(-0.039)	(-0.042)	(-0.040)
NB	-0.509	-0.509	-0.542	-0.473	-0.401	-0.302	-0.224	-0.275	-0.274	-0.376	-0.283
	(-0.042)	(-0.037)	(-0.038)	(-0.039)	(-0.037)	(-0.037)	(-0.040)	(-0.039)	(-0.039)	(-0.042)	(-0.041)
Que	-0.316	-0.339	-0.35	-0.38	-0.271	-0.208	-0.277	-0.201	-0.19	-0.244	-0.23
	(-0.033)	(-0.030)	(-0.031)	(-0.026)	(-0.026)	(-0.025)	(-0.026)	(-0.026)	(-0.026)	(-0.028)	(-0.027)
Man	-0.062	-0.185	-0.087	-0.139	-0.05	0.069	0.168	0.184	0.034	0.088	0.198
	(-0.046)	(-0.040)	(-0.043)	(-0.041)	(-0.038)	(0.040)	(0.042)	(0.042)	(0.038)	(0.042)	(0.042)
Sask	-0.115	-0.147	-0.243	-0.166	-0.107	0.028	0.07	0.059	0.011	-0.028	0.142
	(-0.042)	(-0.038)	(-0.041)	(-0.041)	(-0.038)	(0.040)	(0.042)	(0.041)	(0.042)	(-0.046)	(0.045)
Alta	-0.175	-0.231	-0.132	-0.221	-0.003	0.111	0.051	0.105	0.07	-0.007	0.128
	(-0.035)	(-0.032)	(-0.033)	(-0.035)	(-0.034)	(0.034)	(0.035)	(0.035)	(0.037)	(-0.040)	(0.039)
BC	-0.337	-0.303	-0.235	-0.293	-0.21	-0.125	-0.089	-0.069	-0.041	-0.111	-0.084
	(-0.038)	(-0.035)	(-0.035)	(-0.034)	(-0.033)	(-0.033)	(-0.034)	(-0.034)	(-0.033)	(-0.037)	(-0.036)
No. obs.	11,403	14,973	12,828	13,852	15,785	14,624	13,523	13,526	13,628	11,645	12,176

Source: Author's calculations using the public use microdata files of the Survey of Consumer Finances (files of individuals aged 15 years and older), 1986-1996

Note: Standard deviations in brackets.

Appendix Table A5

Results: Full-time, full-year earnings equations

Men – 1986 to 1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Constant	9.289	8.818	9.208	8.969	8.986	8.753	8.759	9.527	8.524	8.94	8.619
	(0.278)	(0.231)	(0.256)	(0.226)	(0.249)	(0.283)	(0.322)	(0.323)	(0.325)	(0.358)	(0.359)
Age	0.038	0.058	0.043	0.054	0.056	0.063	0.061	0.039	0.076	0.063	0.072
	(0.010)	(0.008)	(0.009)	(0.008)	(0.009)	(0.010)	(0.011)	(0.011)	(0.011)	(0.013)	(0.013)
Age square	0	-0.001	0	-0.001	-0.001	-0.001	-0.001	0	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Educ2	0.042	0.062	0.047	0.054	0.071	0.108	0.135	0.009	0.088	0.067	0.104
	(0.027)	(0.023)	(0.028)	(0.023)	(0.026)	(0.030)	(0.033)	(0.030)	(0.033)	(0.037)	(0.036)
Educ3	0.044	0.13	0.08	0.093	0.137	0.145	0.134	0.076	0.141	0.104	0.136
	(0.032)	(0.027)	(0.030)	(0.025)	(0.030)	(0.033)	(0.034)	(0.029)	(0.033)	(0.038)	(0.037)
Educ4	0.078	0.143	0.11	0.123	0.159	0.203	0.223	0.079	0.177	0.142	0.19
	(0.035)	(0.029)	(0.034)	(0.026)	(0.032)	(0.330)	(0.037)	(0.033)	(0.035)	(0.041)	(0.040)
Educ5	0.268	0.322	0.282	0.331	0.363	0.437	0.448	0.269	0.419	0.384	0.448
	(0.040)	(0.035)	(0.039)	(0.033)	(0.041)	(0.048)	(0.054)	(0.051)	(0.050)	(0.054)	(0.052)
Mar	0.131	0.175	0.172	0.188	0.166	0.163	0.208	0.104	0.167	0.121	0.167
	(0.029)	(0.022)	(0.025)	(0.021)	(0.022)	(0.026)	(0.029)	(0.028)	(0.028)	(0.035)	(0.031)
Imm	-0.084	-0.074	-0.036	-0.066	-0.046	-0.048	-0.104	-0.076	-0.107	-0.127	-0.115
	(-0.015)	(-0.013)	(-0.014)	(-0.013)	(-0.014)	(-0.014)	(-0.015)	(-0.015)	(-0.013)	(-0.017)	(-0.014)
Urb1	0.078	0.03	0.032	0.06	0.041	0.072	0.095	0.072	0.075	0.041	0.05
	(0.018)	(0.017)	(0.017)	(0.017)	(0.016)	(0.015)	(0.018)	(0.016)	(0.019)	(0.018)	(0.020)
Urb2	0.119	0.044	0.064	0.056	0.04	0.115	0.097	0.09	0.087	0.062	0.078
	(0.021)	(0.019)	(0.019)	(0.017)	(0.017)	(0.016)	(0.019)	(0.017)	(0.018)	(0.019)	(0.019)
Urb3	0.066	0.072	0.041	0.041	0.025	0.096	0.07	0.093	0.1	0.052	0.083
	(0.020)	(0.017)	(0.015)	(0.017)	(0.017)	(0.017)	(0.018)	(0.017)	(0.021)	(0.024)	(0.023)
Urb4	0.054	0.063	0.052	0.064	0.038	0.086	0.102	0.073	0.064	0.05	0.056
	(0.017)	(0.016)	(0.017)	(0.015)	(0.015)	(0.015)	(0.015)	(0.016)	(0.019)	(0.019)	(0.019)

Appendix Table A5 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Nfld	0.019	-0.076	-0.091	-0.055	-0.069	-0.115	-0.09	-0.002	-0.129	-0.049	-0.207
	(0.054)	(-0.040)	(-0.043)	(-0.044)	(-0.040)	(-0.045)	(-0.050)	(-0.049)	(-0.042)	(-0.067)	(-0.061)
PEI	-0.089	-0.183	-0.199	-0.187	-0.197	-0.151	-0.208	-0.148	-0.227	-0.21	-0.186
	(-0.041)	(-0.030)	(-0.037)	(-0.038)	(-0.030)	(-0.036)	(-0.034)	(-0.037)	(-0.035)	(-0.044)	(-0.036)
NS	0.004	-0.097	-0.102	-0.1	-0.141	-0.137	-0.133	-0.073	-0.15	-0.181	-0.223
	(0.029)	(-0.022)	(-0.021)	(-0.024)	(-0.020)	(-0.024)	(-0.028)	(-0.029)	(-0.027)	(-0.034)	(-0.031)
NB	-0.002	-0.081	-0.098	-0.061	-0.116	-0.118	-0.146	-0.07	-0.105	-0.135	-0.156
	(-0.032)	(-0.027)	(-0.031)	(-0.025)	(-0.025)	(-0.023)	(-0.022)	(-0.024)	(-0.024)	(-0.031)	(-0.026)
Que	-0.051	-0.026	-0.026	-0.049	-0.053	-0.085	-0.102	-0.087	-0.12	-0.113	-0.142
	(-0.021)	(-0.018)	(-0.020)	(-0.018)	(-0.016)	(-0.015)	(-0.019)	(-0.016)	(-0.015)	(-0.019)	(-0.018)
Man	-0.108	-0.1	-0.133	-0.07	-0.128	-0.139	-0.145	-0.202	-0.112	-0.157	-0.148
	(-0.021)	(-0.019)	(-0.019)	(-0.018)	(-0.017)	(-0.018)	(-0.020)	(-0.021)	(-0.017)	(-0.020)	(-0.021)
Sask	-0.115	-0.069	-0.068	-0.113	-0.159	-0.087	-0.145	-0.189	-0.1	-0.124	-0.11
	(-0.020)	(-0.017)	(-0.021)	(-0.018)	(-0.018)	(-0.017)	(-0.019)	(-0.018)	(-0.019)	(-0.022)	(-0.021)
Alta	0.031	-0.014	-0.02	-0.032	-0.033	-0.028	-0.059	-0.041	-0.029	-0.082	-0.041
	(0.018)	(-0.016)	(-0.015)	(-0.016)	(-0.015)	(-0.015)	(-0.016)	(-0.016)	(-0.016)	(-0.018)	(-0.018)
BC	0.059	0.015	0.059	0.045	0.038	0.004	0.01	0.018	0.009	0.029	-0.004
	(0.023)	(0.019)	(0.018)	(0.018)	(0.017)	(0.016)	(0.017)	(0.016)	(0.015)	(0.019)	(-0.017)
Lambda	-0.45	-0.26	-0.363	-0.254	-0.225	-0.117	-0.101	-0.397	-0.092	-0.188	-0.021
	(-0.100)	(-0.082)	(-0.094)	(-0.081)	(-0.087)	(-0.095)	(-0.106)	(-0.103)	(-0.104)	(-0.114)	(-0.114)
R2	0.217	0.225	0.227	0.221	0.213	0.222	0.228	0.228	0.236	0.198	0.212
Reg.corr.S.D.	0.616	0.547	0.569	0.526	0.534	0.500	0.503	0.570	0.500	0.546	0.495
No. obs.	13,369	17,111	15,467	17,107	17,856	16,110	14,442	14,148	15,017	12,835	13,217

Source: Author's calculations using the public use microdata files of the Survey of Consumer Finances (files of individuals aged 15 years and older), 1986-1996

Note: Corrected standard deviations in brackets.

Appendix Table A6-1

Poverty rates based on potential full-time income
by family type and characteristics of the head, 1986 to 1996

Family type and characteristics of head	*Predicted poverty rates*										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Family types:											
All families 2+	6.2	6.0	6.1	6.0	6.4	6.1	6.9	8.0	6.8	7.1	7.0
All couples	2.7	2.7	2.5	2.4	2.4	2.3	2.4	3.4	2.7	3.0	2.4
Couples without children	2.0	2.1	1.9	1.6	2.2	1.6	1.6	2.4	2.2	2.2	2.2
Couples with children	3.3	3.1	3.0	3.0	2.6	2.9	3.0	4.2	3.2	3.7	2.6
All lone-parent families	43.6	41.8	42.0	43.5	42.2	42.2	42.9	42.5	39.0	42.7	42.7
Female lone-parent families	47.7	45.9	45.7	46.9	46.1	46.2	45.7	46.4	42.3	46.1	46.3
Other families	8.1	7.7	8.5	8.1	10.2	6.7	9.2	11.6	12.1	8.9	9.5
Age of head:											
18-24 years	20.9	19.6	22.0	17.6	26.5	25.1	25.2	28.8	28.8	29.2	32.3
25-34 years	9.4	9.6	8.8	9.5	10.2	10.0	11.3	14.1	10.2	11.7	12.2
35-44 years	5.7	5.2	5.5	5.8	5.6	6.0	7.1	7.4	7.0	7.0	6.6
45-54 years	3.1	3.0	3.0	3.1	2.5	2.0	2.6	3.3	3.1	3.5	3.5
55-64 years	2.6	2.8	3.3	2.8	3.3	2.7	2.9	4.1	3.5	3.7	3.3
Education of head:											
Less than 11 years	14.7	13.3	17.3	16.1	16.8	15.9	20.8	20.3	20.1	22.9	21.4
11 to 13 years	6.8	7.2	6.4	7.9	8.6	8.3	9.4	11.1	9.4	10.1	11.4
Partial post-secondary	6.8	5.7	6.1	6.7	7.2	8.7	6.8	12.3	10.1	11.0	11.1
Completed post-secondary	3.6	3.9	4.1	3.6	4.0	3.8	5.1	5.6	4.7	5.1	4.9
University	1.9	1.8	1.2	1.7	1.5	0.9	1.8	2.4	1.9	1.3	1.6

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

Appendix Table A6-2

Poverty rates based in market income
by family type and characteristics of the head, 1986 to 1996

Family type and characteristics of head	*Market poverty rates*										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Family types:											
All families 2+	19.3	18.4	17.9	16.8	18.9	20.9	21.9	23.5	22.1	22.7	22.5
All couples	14.8	13.9	12.7	12.4	13.7	15.8	15.8	17.1	16.5	17.4	16.5
Couples without children	12.1	12.0	10.4	10.2	11.3	12.7	13.2	13.8	13.8	14.8	13.9
Couples with children	16.8	15.4	14.5	14.1	15.7	18.4	18.1	19.9	19.0	19.6	18.8
All lone-parent families	60.8	59.3	60.1	57.2	62.7	64.2	62.3	67.3	64.2	62.9	65.1
Female lone-parent families	66.2	63.9	64.9	61.5	67.8	68.8	67.0	70.8	67.5	66.7	69.1
Other families	29.7	29.5	29.3	25.8	28.5	28.8	36.2	34.3	32.8	29.5	30.9
Age of head:											
18-24 years	42.9	38.3	43.2	37.2	50.2	49.3	52.3	56.4	57.9	56.4	61.7
25-34 years	21.7	21.1	19.5	20.5	21.6	26.3	27.9	30.0	25.4	25.8	29.1
35-44 years	17.0	16.0	15.6	14.7	18.4	19.2	20.1	22.0	20.9	22.2	21.6
45-54 years	14.1	12.8	12.5	11.5	11.6	12.8	14.4	15.2	15.7	16.1	15.1
55-64 years	19.9	20.4	18.2	17.6	19.3	21.8	21.1	23.7	23.0	23.1	21.7
Education of head:											
Less than 11 years	44.4	41.3	44.1	40.9	45.8	48.2	50.7	55.8	53.2	51.4	56.7
11 to 13 years	22.5	20.9	18.9	20.7	24.2	26.8	30.6	30.5	30.3	30.0	33.0
Partial post-secondary	17.1	15.4	15.6	17.9	17.7	23.4	24.6	28.9	27.5	29.9	29.9
Completed post-secondary	11.6	12.0	12.1	11.6	13.2	15.1	16.3	18.5	17.9	18.9	17.8
University	6.0	7.7	6.6	6.2	7.5	8.6	9.1	10.5	9.1	10.8	9.9

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

Appendix Table A7-1

Composition of the poor population based on their potential full-time income
by family type and characteristics of the head, 1986 to 1996

Family type and characteristics of head	*Composition*										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Family types:											
Couples without children	11.8	13.1	11.9	10.4	13.1	10.3	8.7	11.2	12.7	11.8	12.2
Couples with children	26.0	25.1	24	23.6	19.0	22.0	19.7	23.7	21.4	23.2	16.4
All lone-parent families	53.7	53.5	55.6	57.8	57.9	60.4	63.1	55.7	54.1	56.7	61.6
Other families	8.5	8.3	8.5	8.2	10.1	7.3	8.5	9.5	11.7	8.4	9.8
Age of head:											
18-24 years	14.5	13.4	14.4	10.6	14.1	13.7	12.1	11.4	13.0	12.1	12.4
25-34 years	40.0	41.6	38.3	40.7	40.6	40.0	40.0	40.5	33.6	34.5	35.1
35-44 years	27.2	25.6	27.3	28.9	27.3	30.5	31.7	28.6	32.5	31.6	30.7
45-54 years	10.4	10.6	10.3	11.4	8.8	7.9	9.2	10.3	11.8	12.8	13.2
55-64 years	7.9	8.8	9.7	8.4	9.2	7.9	7.2	9.3	9.1	9.1	8.7
Education of head:											
Less than 11 years	31.6	30.4	35.3	31.2	29.0	27.6	26.0	22.3	24.4	24.9	22.2
11 to 13 years	37.7	38.7	34.2	31.0	33.1	32.7	32.1	30.0	27.8	28.8	29.4
Partial post-secondary	13.2	11.3	11.5	11.2	11.8	14.7	9.6	14.3	14.0	13.0	13.8
Completed post-secondary	11.3	13.4	14.9	21.6	22.0	22.0	26.5	26.7	27.3	29.1	28.9
University	6.2	6.1	4.1	5.0	4.2	3.0	5.8	6.7	6.5	4.2	5.7

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

Appendix Table A7-2

Composition of the poor population based on their market income
by family type and characteristics of the head, 1986 to 1996

Family type and characteristics of head	*Composition*										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Family types:											
Couples without children	22.8	24.5	22.4	23.2	22.7	23.2	23.0	22.3	24.5	25.6	24.0
Couples with children	43.1	40.2	39.9	40.0	38.8	41.2	37.5	38.2	38.5	39.2	36.8
All lone-parent families	24.2	24.8	27.6	27.3	29.0	26.7	29.0	29.9	27.3	26.4	29.3
Other families	10.0	10.4	10.2	9.4	9.5	8.8	10.6	9.6	9.8	8.8	10.0
Age of head:											
18-24 years	9.6	8.6	9.8	8.0	9.0	7.8	7.9	7.6	8.0	7.4	7.4
25-34 years	29.8	30.1	29.4	31.6	28.9	30.7	31.2	29.3	28.8	24.1	26.0
35-44 years	26.1	26.0	26.8	26.6	30.1	28.5	28.3	28.6	29.7	31.7	31.1
45-54 years	15.1	14.5	15.2	15.0	13.7	14.4	15.9	16.1	18.2	18.9	18.0
55-64 years	19.3	20.8	18.9	18.8	18.4	18.7	16.7	18.4	18.3	18.0	17.6
Education of head:											
Less than 11 years	30.7	30.9	31.2	28.5	26.7	24.2	20.0	20.8	19.8	17.6	18.3
11 to 13 years	40.5	36.6	35.4	29.3	31.7	30.3	32.8	27.8	27.0	26.7	26.2
Partial post-secondary	10.6	10.3	10.4	10.7	9.8	11.6	10.8	11.4	11.6	11.1	11.6
Completed post-secondary	11.8	13.6	15.1	24.7	24.4	25.7	27.3	30.1	32.0	33.7	33.1
University	6.3	8.6	7.9	6.8	7.4	8.2	9.0	9.9	9.6	10.9	10.8

Source: Author's calculations using microdata from the Survey of Consumer Finances, certain years

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